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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,011	08/15/2006	Nicolo Steinrisser	P30190	9108
7055 7590 01/02/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER AMIRI, NAHID				
ART UNIT 3679		PAPER NUMBER		
NOTIFICATION DATE 01/02/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/598,011

Applicant(s)

STEINRISSER, NICULO

Examiner

NAHID AMIRI

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 12, 13 and 19 is/are allowed.
- 6) ☒ Claim(s) 11, 14-18, 20-22 and 24-31 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

In view of Applicant's Amendment received 30 September 2008, amendments to the claims have been entered. Claims 1-10 are canceled. Claims 11-31 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 14, 15, 18, 20, 22, 24, 25, 30, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 3,367,142 Groves et al.

With respect to claim 11, Groves et al. disclose a groove profile (Fig. 5) for a positive hub-shaft connection comprising a hub (16) having a plurality of grooves (G, constituted by two adjacent groove) with an essentially quadrilateral groove cross section; a shaft (11) having a plurality of grooves with an essentially quadrilateral groove cross section.; and at least one rib (R) radially projecting from one of the grooves (G) of the hub (16) towards one of the grooves (constituted by two adjacent grooves of the shaft. 11) of the shaft (11).

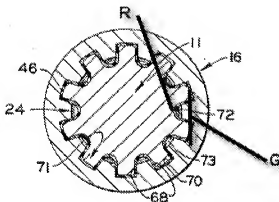


FIG. 5

With respect to claims 14 and 15, Groves et al. disclose (Fig. 5) that the at least one rib (R) runs parallel to a flank of the groove from which the rib (R) projects; wherein the at least one rib (R) runs along an entire length of the groove (G) from which the rib projects (R).

With respect to claim 18, Groves et al. disclose (Fig. 5) that a radius of a support surface of the at least one rib (R) imparts a connection between the hub grooves (G) and the shaft grooves that is one of free from play and under initial stress with respect to a longitudinal axis of the hub (16) or the shaft. 911).

With respect to claim 20, Groves et al. disclose (Fig. 5) that the essentially quadrilateral groove cross section is an essentially rectangular groove cross section.

With respect to claim 22, Groves et al. disclose telescopic tube (Fig.5) for drive shafts comprising an outer tube (16) having a plurality of grooves with an essentially quadrilateral groove cross section; an inner tube (11) having a plurality of grooves (G, constituted by two

adjacent groove of the inner tube 11) with an essentially quadrilateral groove cross section, the groove profile having at least one rib (R) radially projecting from one of the grooves of the inner tube towards one of the groove of the outer tube

With respect to claim 24, Groves et al. disclose (Fig. 5) that the inner tube and the outer tube (11, 16) are hollow bodies each with an approximately uniform profile thickness; and wherein the essentially quadrilateral groove cross section is an essentially rectangular groove cross section.

With respect to claim 25, Groves et al. disclose (Fig. 5) that the essentially quadrilateral groove cross section is an essentially rectangular groove cross section.

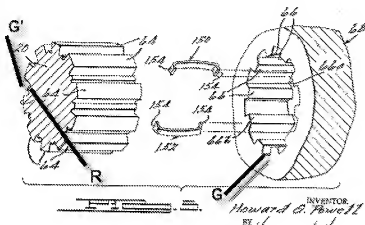
With respect to claim 30, Groves et al. disclose a groove profile (Fig. 5) for a positive hub-shaft connection comprising a hub (16) having a plurality of grooves (G, constituted by two adjacent groove) with an essentially quadrilateral groove cross section; a shaft (11) having a plurality of grooves with an essentially quadrilateral groove cross section.; and at least one rib (R) radially projecting from one of the grooves (G) of the hub (16) towards one of the grooves (constituted by two adjacent grooves of the shaft. 11) of the shaft (11); and wherein the at least one rib (R) is formed in one piece from a material of the groove from which the at least one rib (R) project.

With respect to claim 31, Groves et al. disclose (Fig. 5) that the at least one rib (R) is formed in one piece from a material of the groove from which the at least one rib (R) project.

Claims 11, 14, 15, 18, 20, 30, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 3,364,768 Powell.

With respect to claim 11, Powell discloses a groove profile (Fig. 5) for a positive hub-shaft connection comprising a hub (68) having a plurality of grooves (G) with an essentially quadrilateral groove cross section; a shaft (20) having a plurality of grooves (G') with an

essentially quadrilateral groove cross section; and at least one rib (R) radially projecting from one of the grooves (G') of the shaft (20) towards one of the grooves (G) of the hub (68).



With respect to claims 14 and 15, Powel discloses (Fig. 5) that the at least one rib (R) runs parallel to a flank of the groove from which the rib (R) projects; wherein the at least one rib (R) runs along an entire length of the groove (G') from which the rib projects (R).

With respect to claim 18, Powel discloses (Fig. 5) that a radius of a support surface of the at least one rib (R) imparts a connection between the hub grooves (G) and the shaft grooves (G') that is one of free from play and under initial stress with respect to a longitudinal axis of the hub (68) or the shaft (20).

With respect to claim 20, Powel discloses (Fig. 5) that the essentially quadrilateral groove cross section is an essentially rectangular groove cross section.

With respect to claims 30 and 31, Powell discloses a groove profile (Fig. 5) for a positive hub-shaft connection comprising a hub (68) having a plurality of grooves (G) with an essentially quadrilateral groove cross section; a shaft (20) having a plurality of grooves (G') with an essentially quadrilateral groove cross section; at least one rib (R) radially projecting from one of the grooves (G') of the shaft (20) towards one of the grooves (G) of the hub (68); and at least one rib (R) is formed in one piece from a material of a groove (G') from which the at least one rib (R) project; and wherein the at least one rib (R) is formed in one piece from a material of the groove from which the at least one rib (R) project.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 17, 21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al.

With respect to claims 16, 17, 21, and 26, Groves et al. disclose the claimed invention except that the at least one rib has a trapezoidal cross section tapering outwards and has a maximum width of 50% or 25% of a width of a corresponding groove from which the rib projects; and wherein the essentially quadrilateral groove cross section is an essentially trapezoidal groove cross section. Applicants admit in specification, paragraph 009, line 2, that the groove is rectangular or trapezoidal. Therefore, there is no criticality with respect to a specific shape of rib and groove being claimed. Also, it is conventional design practice to routinely experiment to arrive at desired values for a particular intended use. It would have been an obvious matter of design choice as determined through routine experimentation and optimization to provide the trapezoidal cross section of Groves et al. with a width of 50% or 25% of a width of a

corresponding groove in order to provide the groove profile with a specific desirable dimensions and strength.

Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al. as applied to claims 11, 14, 15, 18, 20, 22, 24, 25, 30, and 31 above, and further in view of Pub. No. US 2002/0040835 A1 Fukukawa et al.

With respect to claims 27 and 28, Groves et al. disclose the claimed invention except for a method of producing a groove profile comprising conforming surface of one of the hub and the shaft with a profile mandrel through engagement with one or more profile rollers; and profiling the surface of one of the hub and the shaft to form the at least one rib. Fukukawa et al. (Fig. 6) teach a method of producing a groove profile by conforming surface of one of the hub (23) and the shaft (22) with a profile mandrel (3) through engagement with one or more profile rollers (5); and profiling the surface of one of the hub (23) and the shaft (22) to form the at least one rib (3d); and wherein periodic impacting engaging of the one or more profile rollers (3) with a surface of one of the hub (23) and the shaft (22). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the profile groove of Groves et al. with the step method of Fukukawa et al. in order to produce a groove profile.

Claims 16, 17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell.

With respect to claims 16, 17, and 21, Powell fails to disclose that the at least one rib has a trapezoidal cross section tapering outwards and has a maximum width of 50% or 25% of a width of a corresponding groove from which the rib projects; and wherein the essentially quadrilateral groove cross section is an essentially trapezoidal groove cross section. Applicants admit in specification, paragraph 009, line 2, that the groove is rectangular or trapezoidal. Therefore, there is no criticality with respect to a specific shape of rib and groove being claimed. Also, it is conventional design practice to routinely experiment to arrive at desired values for a particular intended use. It would have been an obvious matter of design choice as determined through routine experimentation and optimization to provide the trapezoidal cross section of Powell with a

width of 50% or 25% of a width of a corresponding groove in order to provide the groove profile with a specific desirable dimensions and strength.

Claim 22 and 24-26 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 3,367,142 Groove et al. in view of Powell.

With respect to claim 22, Groves et al. disclose telescopic tube (Fig.5) for drive shafts comprising an outer tube (16) having a plurality of grooves with an essentially quadrilateral groove cross section; an inner tube (11) having a plurality of grooves (G, constituted by two adjacent groove of the inner tube 11) with an essentially quadrilateral groove cross section. Grooves et al. fail to disclose that the groove profile having at least one rib radially projecting from one of the grooves of the inner tube towards one of the groove of the outer tube. Powell teaches a groove profile (Fig. 5) having at least one rib (R) radially projecting from one of the grooves (G) of a shaft towards a groove of an outer tube (68). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the groove profile of Groves et al. with at least one rib radially projecting from one of the grooves of the inner tube towards one of the groove of the outer tube as taught by Powell in order to prevent the tubes from disengaging one another.

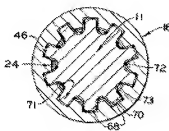


FIG. 5

With respect to claim 24, Groves et al. disclose (Fig. 5) that the inner tube and the outer tube (11, 16) are hollow bodies each with an approximately uniform profile thickness; and

wherein the essentially quadrilateral groove cross section is an essentially rectangular groove cross section.

With respect to claim 25, Groves et al. disclose (Fig. 5) that the essentially quadrilateral groove cross section is an essentially rectangular groove cross section.

With respect to claim 26, Groves et al. and Powell fail to disclose that the at least one rib has a trapezoidal cross section tapering outwards and has a maximum width of 50% or 25% of a width of a corresponding groove from which the rib projects; and wherein the essentially quadrilateral groove cross section is an essentially trapezoidal groove cross section. Applicants admit in specification, paragraph 009, line 2, that the groove is rectangular or trapezoidal. Therefore, there is no criticality with respect to a specific shape of rib and groove being claimed. Also, it is conventional design practice to routinely experiment to arrive at desired values for a particular intended use. It would have been an obvious matter of design choice as determined through routine experimentation and optimization to provide the trapezoidal cross section of Groves et al. with a width of 50% or 25% of a width of a corresponding groove in order to provide the groove profile with a specific desirable dimensions and strength.

Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groves et al. and Powell as applied to claims 22, 24, 25, 30, and 31 above, and further in view of Pub. No. US 2002/0040835 A1 Fukukawa et al.

With respect to claims 27 and 28, Groves et al. and Powell fail to disclose a method of producing a groove profile comprising conforming surface of one of the hub and the shaft with a profile mandrel through engagement with one or more profile rollers; and profiling the surface of one of the hub and the shaft to form the at least one rib. Fukukawa et al. (Fig. 6) teach a method of producing a groove profile by conforming surface of one of the hub (23) and the shaft (22) with a profile mandrel (3) through engagement with one or more profile rollers (5); and profiling the surface of one of the hub (23) and the shaft (22) to form the at least one rib (3d); and wherein periodic impacting engaging of the one or more profile rollers (3) with a surface of one of the hub (23) and the shaft (22). It would have been obvious to one of ordinary skill in the art at the

time of invention was made to provide the profile groove of Groves et al. with the step method of Fukukawa et al. in order to produce a groove profile.

Response to Arguments

Applicant's arguments filed 30 September 2008 have been fully considered but they are not persuasive.

With respect to claims 11, 22 and 30, Applicants argue that to anticipate a claim, each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference. Further, Applicants argue that Groves et al. do not disclose all of the features of the claimed invention. Additionally, Applicants allege that the examiner has not given "groove" its usual and customary reasoning nor broadest reasonable interpretation in view of the specification. Meanwhile, Applicants acknowledge in their remarks, page 10, lines 8-11, that the pending claims must be given their broadest reasonable interpretation consistent with the specification and Examiner is not free to disregard the meaning given to a term in the specification simply for the purpose of conforming the applied art to a recited claim term. This is not persuasive.

Examiner points out that (1) for anticipation to exist, the language of the claims need only "read on" something in the prior art and (2) while claims are read in light of the specification, this does not mean that limitations not otherwise found in the claims will be imported into the claims from the specification. The claims require "grooves" and also a rib projecting from the groove. The height of this rib is not specified nor is the structure of the rib. Nothing in the claims defines the "rib" in any manner that would preclude one of the splines (terminology of the reference) from constituting a "rib" as broadly recited in the claims. Further, it is quite evident that a "groove" would no longer have a continuous groove floor once a projecting "rib" has been formed thereon as any provision of a rib would necessarily mean that the single groove that was present beforehand is now two adjacent grooves each to a respective side of the rib. Applicant has failed to show that the "spline" of the reference cannot constitute the "rib" as instantly

claimed, especially when the examiner has clearly shown how such claim language "reads on" the prior art structure.

Applicant alleges that the examiner hasn't given "groove" its usual and customary reasoning. How is this so? Is it applicant's position that a "groove" cannot have a structure projecting from the groove floor that would serve to break up the floor into two separate parts? How is it that applicant's "groove" is able to have a rib projecting from the floor thereof (to thus break it up into two "adjacent grooves"), but the prior art can't? Why is it that applicant considers his disclosed two grooves, one on either side of the rib, as one groove, but the prior art provided with a "rib" and grooves to each side thereof must be interpreted as two grooves and no rib? What is the basis for this difference of interpretation and where is this difference found in the claims as an actual structural limitation? It appears that applicant seeks to rely on the specification to impart to the claims limitations otherwise not recited therein. This reliance is insufficient. Applicant should amend the claims to clearly define the rib and groove in such a manner that it cannot be read on the prior art structure of Grove et al.

As for the "quadrilateral" recitation, the reference's shape is quadrilateral as much as Applicants' is (note that "quadrilateral" means having four sides). Applicant's labeling of every conceivable side surface in order to purportedly show "not quadrilateral" while refraining from doing the same thing with his own invention is not well-taken. How is the groove shown in applicant's Fig. 2 "quadrilateral" when one can count seven different surfaces defining the groove (not including the open top surface)? The answer is, the groove itself is a quadrilateral and one does not include the rib when determining whether the groove is quadrilateral.

The rationale for the Section 103 rejection has been set forth and applicant has failed to establish that the claimed dimensional values produce any results that are different in kind (as opposed to degree), let alone establish the criticality of the results that are produced. It has long been established by case law that merely specifying dimensional values in a claim does not cause that claims to be unobvious and patentable. Further, in view of the fact that the PTO does not have testing facilities, it is applicant's burden to establish the criticality of the claimed values. Finally, merely because applicant does not agree with the position set forth by the examiner does not mean that the examiner did not set forth a prima facie case. Moreover, the issue of whether

or not a prima facie case has been set forth is a matter of law that would be appealable to the Board of Appeals for resolution.

Finally, it is noted that this instant response is the third rejection of the claims of this applicant and that applicant has already received two non-final rejections. In Applicant's instant response to the previous non-final rejection, applicant declined the opportunity to amend the claims, let alone amend the claims in a manner that would preclude the examiner's interpretation. Accordingly, it would appear that clear issues for appeal have been reached. In light of newly applied Powell, this Office action will not be made final. However, applicant is forewarned that the next Office action will be made final unless a new rejection not necessitated by applicant's amendment is applied. Once prosecution is closed, not amendment to the claims will be entertained unless applicant presents good and sufficient reasoning as to why the amendment is necessary and was not earlier presented.

Allowable Subject Matter

Claims 12, 13, and 19 stand allowed.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 12, lines 8-13, the closest prior art, Powell (US 3,364,768), discloses the claimed system with the exception of "a radially inward surface of the groove of the hub forms a hub groove head and a radially outward surface of the groove of the hub forms a hub groove root, and wherein a radially inward surface of the groove of the shaft forms a shaft groove root and a radially outward surface of the groove of the shaft forms a shaft groove head, the at least one rib projects radially from one of the hub groove head, the hub groove root, the shaft groove head, and the shaft groove root".

Claims 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claim 23, lines 2-7, the closest prior art Groves et al. (US 3,367,142) and Powell (US 3,364,768) disclose the claimed system with the exception of “a radially inward surface of the groove of the hub forms a hub groove head and a radially outward surface of the groove of the hub forms a hub groove root, and wherein a radially inward surface of the groove of the shaft forms a shaft groove root and a radially outward surface of the groove of the shaft forms a shaft groove head, the at least one rib projects radially from one of the hub groove head, the hub groove root, the shaft groove head, and the shaft groove root”.

There is no teaching or suggestion, absent the applicants' own disclosure, for one having ordinary skill in the art at the time the invention was made to modify the connector device as disclosed by Groves et al. (US 3,367,142) and Powell (US 3,364,768) to have the above mentioned elemental features.

Response to Arguments

Applicant's arguments with respect to claims 11-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on Monday through Thursday from 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nahid Amiri
Examiner
Art Unit 3679
December 12, 2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679